

Mendez England & Associates

***U.S. Agency for International Development/Poland
Manufacturing Technology Transfer Project***

FABRYKAT 2000

I. PROGRAM STRATEGIC OBJECTIVES

FABRYKAT 2000 is a two-year program sponsored by the U.S. Agency for International Development (USAID) and implemented by Mendez England & Associates through Sept. 9, 2000. With FABRYKAT 2000, USAID wants to facilitate the development of Poland's private manufacturing sector at the level of small and medium-size enterprises (SMEs), to make them more competitive globally, especially within the context of Poland's anticipated membership in the European Union (EU).

To achieve this objective, FABRYKAT 2000 is building a sustainable network of Polish business organizations -- referred to as technology transfer centers (TTCs) -- specializing in manufacturing extension services and technology transfer to SMEs. While the TTCs are to be the primary beneficiaries of FABRYKAT 2000 assistance, SMEs will be the beneficiaries of direct technical assistance addressing their specific needs; this assistance will be provided in conjunction with the participating TTCs.

These efforts should result in increased competitiveness, and improved planning, management, marketing and production capacity of enterprises. Another equally important goal is to help the institutions responsible for promoting economic development on a national and regional level to incorporate technology transfer mechanisms into their strategic development plans, in order to promote economic growth and job creation.

The project activities have four major components:

- A) bringing to Poland "best practices" in technology transfer from the U.S. and Europe;
- B) establishing a functional technology transfer system, including the required legal, institutional and financial infrastructure;
- C) restructuring and strengthening regional TTCs; and
- D) providing direct assistance to SMEs with the participation of pilot TTCs, to demonstrate the applicability of proposed technology transfer solutions in Poland.

Manufacturing sector -- Broadly defined as those enterprises involved in the creation or fabrication of goods for either intermediate or end users. This sector may also include firms providing skills, services and processes contributing to a manufacturing process, for example, a quality control system.

Technology Transfer -- The introduction of practical technical or scientific applications to new or existing commercial goods or services. For the purpose of this document, these efforts include both the facilitation of a technical application from a concept to a commercial product as well as the introduction of proven technologies to existing SMEs seeking to modernize their manufacturing operations.

While most FABRYKAT 2000 activities are focused directly on the TTCs and SMEs, the program also intends to work closely:

- with the Scientific Research Committee (KBN) to strengthen policy and institutional elements of a national technology transfer strategy;
- with the Foundation for Polish Science (FNP) to help develop appropriate financing mechanisms, including a seed capital fund;
- with the Technology Agency (ATT) to help it develop as a central technology information clearinghouse that could screen and assist promising science and technology projects;
- and with selected voivodship legislative and executive offices to ensure that technology transfer is appropriately incorporated in regional development strategies and funding.

The Poznan-based Polish Business and Innovation Centers Association (SOOIPP), with its associated Science Park and Innovation Center Experts Group of the Innovation Centers in Eastern Central Europe (SPICE/ICECE), is a strategic partner in FABRYKAT 2000 information dissemination.

The various forms of assistance being provided by FABRYKAT 2000 include: training in Poland and abroad; bringing U.S. and European consultants to Polish institutions and SMEs; implementation of practical solutions from the best TTCs in the world; establishing contacts with institutions involved in technology transfer in Poland and abroad; facilitating dissemination of information on technology transfer to interested parties in Poland.

The program is being carried out through the FABRYKAT 2000 main office in Warsaw, and regional representatives (FABRYKAT 2000 Technology Business Analysts) and/or participating TTCs in Lodz, Wroclaw, Krakow, Poznan, Gdansk and Zabrze. (See Contact List) In the beginning of the program, a study on U.S. and European technology transfer systems was conducted. The best practices in technology transfer applicable to Poland were identified, and American centers which showed the greatest potential to be of help to Polish TTCs were selected. Appropriate materials were published in book form and are being distributed to interested centers and institutions, as well as being posted on the Internet at the following address: **www.fabrykat2000.org.pl**.

II. SCOPE OF WORK

II.A. Best Practices

In order to disseminate knowledge about “best practices” in technology transfer, a series of seminars and conferences are being held throughout the country, e.g. Krakow and Wroclaw in April, 1999; Poznan and Lodz in June 1999, etc.. Invited guests from the U.S. and Europe will evaluate materials gathered thus far on the state of technology transfer infrastructure in Poland and recommend concrete steps to be implemented in promoting technology transfer as a critical element of economic development both on a national and regional level. The intention of the program organizers is to attract to these seminars the chief representatives of local authorities, science and business.

FABRYKAT 2000 is also co-sponsoring with the Polish Business and Innovation Centers Association (SOOIPP) two conferences – one in October 1999 and one in September 2000, in Poznan and Warsaw, respectively. It will also participate in the Intertechnology '99 Expo in Lodz in June 1999, and in the Innovation '99 Exhibit that is part of the Poznan International Fair in June 1999, with similar participation envisaged for the corresponding events in the year 2000.

One of the long-term goals of FABRYKAT 2000 is to ensure that an adequate supply of trained technology transfer personnel will also be available in the future, beyond the life span of the program. To this end, it is preparing a year-long academic program in technology management on the MBA level. The new curriculum will be introduced in three business schools, thus increasing the expertise level of Polish managers.

II.B. Technology Transfer System Development

FABRYKAT 2000 is helping to develop a technology transfer infrastructure, both for private and public institutions. This system is being developed through a network of connections among key partners in technology transfer: TTCs, SMEs, other centers promoting entrepreneurship and innovation, government agencies, associations, foundations, banks, investment funds (i.e. seed and venture capital funds), universities and other R&D institutions. The main objective of the above-mentioned system is to facilitate information exchange and to establish close cooperation in the implementation of specific projects. Regional representatives of the Program (FABRYKAT 2000 Technology Business Analysts) located in Warsaw, Krakow, Gdansk, Poznan, Lodz, Wroclaw and Zabrze are working with the TTCs and SMEs on implementing FABRYKAT 2000 objectives.

One of the strategic partners of FABRYKAT 2000 is the Poznan-based Polish Business and Innovation Centers Association (SOOIPP) with its associated Science Park and Innovation Center Experts Group of the Innovation Centers in Eastern Central Europe (SPICE/ICECE). Its membership includes approximately 100 entrepreneurship incubators, technology centers and other organizations interested in stimulating economic development. SOOIPP will form the basis for the Program's information network and ensure the utilization of accumulated experience long after the completion of the Program. FABRYKAT 2000 will, through SOOIPP, establish contacts with appropriate organizations in the neighboring countries, especially in Eastern Europe, eg., in Ukraine, Lithuania, Latvia and Estonia.

FABRYKAT 2000 is in the process of establishing close ties with the key institutions that conceptually are interested in technology transfer in the SME sector or seek to support it: the Ministry of Economy, Agency for Technology (ATT), Scientific Research Committee (KBN), Foundation for Polish Science (FNP), Polish Foundation for SME Promotion and Development (FMSP), and at the voivodship level the various Agencies for Regional Development. Within the scope of establishing this network, contacts are being developed with other USAID programs (FIRMA 2000, Local Government Partnership Program), European Union aid programs, UNIDO, World Bank programs and others.

FABRYKAT 2000 will help create in Poland one or more "seed capital" funds that will invest in undertakings or innovation companies at an early stage of their development. Lack of such funds is one of the main obstacles in technology transfer in Poland. To this end,

FABRYKAT 2000 consultants will prepare a strategic plan, perform “due diligence,” and develop a business plan as well as providing help in finding appropriate partners in Poland or abroad to create the funds.

The FABRYKAT 2000 Advisory Board for Applied Science and Technology will assist the program in implementing the program’s objectives. The Board Members include individuals of high professional standing in academia, and the business and financial communities in Poland, Western Europe and the U.S. The Board advises the Program Director on such matters as the work plan, cooperation partners, selection of innovation companies and projects that should receive assistance, as well as help in establishing contacts in Poland and abroad. The board members are:

1. Prof. Adam Fraczek, Secretary of the Board
2. Prof. Krzysztof Kurzydowski, Pro-rector of Warsaw University of Technology, Chairman of the Agency for Technology Board
3. Prof. Mirosław Malek, Berlin, Humboldt University TTC Director
4. Prof. Michał Nawrocki, Pro-rector of Warsaw University
5. Mariusz Orłowski, Vice-president of Motorola Central and Eastern Europe
6. Lesław Paga, President of Deloitte Touche Polska
7. Kazimierz Pazgan, President of Konspol
8. Roman Rewald, Vice-Chairman of American Chamber of Commerce
9. Witold Sulimirski, Chairman of Kosciuszko Foundation, President of Intercap Investments Inc.

A key element in fostering an environment that is conducive to technology transfer in Poland is providing advice to key institutions in the Polish government that are responsible for economic development, both at the national and the regional/voivodship level, and to ensure that the concept of technology transfer is incorporated in their strategic vision. To this end, FABRYKAT 2000, particularly in cooperation with SOOIPP, is endeavoring to develop an appropriate advocacy program at all levels of government.

II.C. Restructuring and Enhancement of TTCs

FABRYKAT 2000 is helping selected TTCs in enhancing and developing on-going activities so that those TTCs become more self-sustainable in the long term and provide a higher level of services to SMEs. Four pilot TTCs have been selected for enhancement and development; however, other centers or institutions interested in fostering technology transfer will remain within the scope of the Program’s interests and benefit from information and advice. Support will be given to initiatives aimed at the establishment of regional technology transfer structures, for example, bringing together TTCs and scientific institutions, business promotion centers, financial institutions funding SMEs, etc. Such initiatives increase the chances of TTCs and other established structures to survive long after the completion of the FABRYKAT 2000 program.

The TTCs, with the help of advisors who are leading practitioners of technology transfer organization in the U.S. and Europe, will be able to adapt global best practices to their own needs and requirements in such areas as:

- structure and organization
- staffing and management
- accounting systems (revenue and outlay tracking)
- types and levels of services
- delivery of services
- marketing techniques to attract firms
- identifying and selecting firms
- identifying and forming linkages with:
sources of science and technology; business and management advice
financial institutions and venture capital.

FABRYKAT 2000 will provide intensive training in Poland and visits to the key centers in the U.S. for pilot TTC staff, SME representatives, R&D and financial institutions personnel, and other persons involved in technology transfer, in order not only to familiarize these individuals with American achievements, but also to develop direct cooperation among various institutions. Training materials will be made available to all interested organizations in Poland.

Prior to the implementation of restructuring plans for TTCs, FABRYKAT 2000 will choose partner centers in the U.S. with which Polish TTCs will establish close cooperation. Representatives of selected Polish TTCs will go for one-month internships to partner centers to get acquainted with practical methods and daily work procedures of their American partners. They will further help their own centers draft business plans, that include the above-mentioned elements, which will be prepared at the completion of the Program.

II.D. Direct assistance to SMEs

A pivotal element of FABRYKAT 2000 is direct assistance to the Small and Medium-sized Enterprises (SMEs) as a means of demonstrating to TTCs how to implement an appropriate manufacturing extension services strategy. Primary emphasis is being placed on helping SMEs solve existing and identified manufacturing problems; conducting a technology assessment to improve their technological level in the manufacturing process; and – with the help of FABRYKAT 2000 sister-program, FIRMA 2000 – providing appropriate assistance in developing strategies and business plans that can justify the financing of needed improvements. While FABRYKAT 2000 does not envisage direct financial assistance to the relevant TTCs and SMEs, its goal is to ensure that funding for the chosen projects will be made available either from private commercial institutions (seed capital funds, venture capital funds, banks) or from relevant domestic and/or international funding sources which seek to promote technology transfer.

SME can obtain help from FABRYKAT 2000 in the form of their representatives participation in training, conferences and seminars, as well as direct assistance of American and

First training in US took place in the second half of January, 1999. Twenty participants visited the following sites:

- Ben Franklin Technology Center in Philadelphia, Pennsylvania
- National Technology Transfer Center in Wheeling, West Virginia
- Cleveland Advanced Manufacturing Program in Cleveland, Ohio
- Association of University Related Research Parks (AURRP) Conference on Financing Innovations, in Tucson, Arizona.

Polish consultants to show-case enterprises. Pilot TTCs will be intermediaries, thus gaining the necessary “hands-on” experience in implementing best practices in technology transfer. The show-case enterprises will also help verify restructuring plan assumptions and build a system of fee-based services for TTCs.

III. THE ROLE OF FABRYKAT 2000 TECHNOLOGY BUSINESS ANALYSTS

At present, FABRYKAT 2000 employs eight local technology business analysts (TBAs): in Gdansk, Lodz, Krakow, Zabrze, Wroclaw, Poznan, and two in Warsaw. Their roles and scope of work vary slightly, depending on the location. In cities where pilot TTCs are well-developed, the analysts work for the centers. This is a direct form of support the Program provides for TTCs. The goal of the analysts is to:

- help TTCs assimilate best practices of foreign centers;
- help Program consultants transfer and implement the above practices in Poland;
- plan daily activities of the TTC, and incorporate help offered by the Program;
- maintain working relations and ensure information flow between the TTC and FABRYKAT 2000;
- identify innovative, high-growth potential SMEs as well as persons and institutions interested in joining technology transfer efforts in Poland; and
- monitor the TTC’s restructuring progress and completion of their projects, prepare reports for FABRYKAT 2000.

The above objectives apply to the analysts in Lodz, Wroclaw, Krakow, and Warsaw. In addition, in Krakow and Warsaw, the analysts participate in the efforts of organizing TTCs on a regional level. In Poznan, a FABRYKAT 2000 representative is helping SOOIPP to build a nation-wide information network and maintain connection with Association members (approximately 100 business incubators, technology centers, regional development agencies, consulting firms, etc.). In Gdansk and Zabrze, the analysts are concentrating on examining innovation potential and identifying possibilities for cooperation with the institutions and businesses of their respective regions.

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